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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/557,600	04/25/2000	Yonggang Du	PHD 99,056	8246
24737	7590	06/17/2004	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			MILLS, DONALD L	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 06/17/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/557,600

Applicant(s)

DU, YONGGANG

Examiner

Donald L. Mills

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 3-8, and 10-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 10, and 12, the claim specifies *derive a packet* (For example, see claim 1, line 15.) It is unclear from the context of the claim if the derived *a packet* is an entirely new packet that is not equivalent to any previous packet, or if the derived *a packet* is one of the previously combined several packets. For the purpose of this examination, the Examiner will interpret this as *derived from one of said combined several packets*.

Also regarding claims 1, 10, and 12, the claim specifies *the relevant associated network cluster* (For example, see claim 1, line 16.) It is unclear from the context of the claim which network cluster is the relevant associated network cluster.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1, 3, 4, 9, 10, 12, 13, 14, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. (US 6,442,149 B1), hereinafter referred to as Nakano, in view of Watanabe et al. (US 6,084,888), hereinafter referred to as Watanabe and, further, Nakano in view of Lin et al. (US 5,742,599), hereinafter referred to as Lin.

Regarding claims 1, 9, 10, and 12, Nakano discloses a transmission system between a base station and switching center, which comprises:

A network with several network clusters of at least one wireless node (Referring to Figures 2A and 2B, wireless network with base stations 101-1 ... 101-k,) the wireless network node including a transmitter/receiver for the wired transmission/reception of packets in time slots of given length in a time multiplex process (Referring to Figures 2A and 2B, base station 101-1 comprises a transmitter/receiver 102 for the transmission of ATM cells in a TDM process. See column 2, lines 54-57. The Examiner infers that for CBR traffic the ATM cells are transmitted during a constant fixed time period, which is equivalent to a fixed time slot,) the variable length of the packets having at least a value which is smaller than the length of the fixedly given time slot (Referring to Figures 2A and 2B, the ATM cells are transmitted in frames where the individual cells are smaller than the length of the frame. See column 2, lines 53-56.)

Configuring the transmitting wireless network node of the wireless network nodes to combine several packets into a superpacket and transmit the superpacket to all wireless network nodes authorized for the data transmission via a point-to-multipoint link (Referring to Figures 2A and 2B, base station 101-1 utilizes ATM cell assembler/disassembler 103 to place ATM cells in a frame for transmission to the mobile services switching center 107, which is coupled to base stations 101-1 ... 101-k and ATM switch 106. See column 3, lines 34-43.)

Designing the receiving wireless network node of the wireless network nodes for after the reception of the superpacket to derive a packet form the superpacket if the destination of the packet lies in the relevant associated network cluster (Referring to Figures 2A and 2B, the mobile services switching center **107** receives the transmitted frame **200** and disassembles the frame into ATM cells, since the mobile services switching center **107** is the intended destination of the cells. See column 3, lines 39-44.)

Nakano does not disclose *a transmitter for the wireless transmission of packets in time slots.*

Watanabe teaches the wireless transmission of ATM cells between wireless relay station **523** and wireless relay station **521** (See column 3, lines 45-46.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement wireless transmission of Watanabe in the system of Nakano. One of ordinary skill in the art would have been motivated to do so in order to support transmission between base stations in a system where a centralized controller is not utilized or available. An added benefit of doing so would allow greater flexibility in the placement of wireless base stations.

Nakano does not disclose *configuring the transmitting wireless network node to segment the superpacket into cells when the length of the superpacket exceeds the length of the fixedly given time slots and inserting the cells into several time slots, and configuring the receiving wireless network node which receives the cells for forming the superpacket from the cells.*

Lin teaches an ATM card **24** which utilizes the SAR sub-layer to segment the typically large data packets from the ATM higher layer AAL-5 into ATM cells (See column 5, lines 63-

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65.) Lin further teaches recombining the ATM cells into larger AAL-5 PDUs (See column 6, lines 2-4.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the cell segmentation and reassemble of MPEG traffic of Lin in the time-slot based ATM transmission system of Nakano. One of ordinary skill in the art would have been motivated to do so in order to transmit MPEG data from a base station to a mobile switching center. An added benefit of doing so would allow the wireless transmission of constant bit rate encoded MPEG traffic streams to be transmitted between wireless and wired users.

Regarding claims 3 and 13, the primary reference further teaches *the transmitting wireless node is designed for inserting the cells into several time slots of a frame or into one or several time slots of several frames* (Referring to Figure 2A and 2B, base station **101-1** places the ATM cells on the cell slots for transmitting the ATM cells as a frame. See column 3, lines 34-39.)

Regarding claims 4 and 14, the primary reference further teaches *one of the wireless network nodes from among the wireless network nodes which form a wireless network is constructed so as to form a central node which is designed to control the radio traffic* (Referring to Figures 2A and 2B, mobile services switching center **107** manages the connected base stations **101-1...101-k** thereby managing the radio traffic. See column 2, lines 60-63.)

Regarding claims 19-21, the primary reference further teaches *the transmitting wireless network node is designed for inserting the cells into several time slots of several frames*

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(Referring to Figures 2A and 2B, base station 101-1 places the ATM cells on the cell slots of several frames for transmitting the ATM cells. See column 3, lines 34-39.)

5. Claims 5, 6, 11, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. (US 6,442,149 B1) in view of Watanabe et al. (US 6,084,888) and Lin et al. (US 5,742,599), and further in view of Pasternak et al. (US 5,936,949), hereinafter referred to as Pasternak.

Regarding claims 5 and 15, the limitations of parent claims have been addressed above.

Nakano does not disclose *designing the receiving wireless network node to compare the address identification in the control field of the packet with an address which belongs to the associated network cluster and which identifies the destination.*

Pasternak teaches checking the overhead address field to determine whether the received cell should be utilized (See column 13, lines 52-54,) and maintaining a connection table for virtual circuits (See column 14, lines 39-40.) Pasternak further teaches that delegating as many functions as possible to the base station, in a point-to-multipoint system, is favorable because it eliminates the need to replicate the same function in all terminals in a network (See column 1, lines 63-67.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the address resolution and connection table of Pasternak in the base station of Nakano utilizing the wireless transmission of Watanabe. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to centralize the transfer of data in order to increase system efficient for multi-cell transmission.

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Regarding claims 6 and 16, the limitations of parent claims have been addressed above.

Nakano does not disclose *the receiving wireless network node containing a table for the storage of all addresses of the associated network cluster.*

Pasternak teaches checking the overhead address field to determine whether the received cell should be utilized (See column 13, lines 52-54,) and maintaining a connection table for virtual circuits (See column 14, lines 39-40.) Pasternak further teaches that delegating as many functions as possible to the base station, in a point-to-multipoint system, is favorable because it eliminates the need to replicate the same function in all terminals in a network (See column 1, lines 63-67.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the address resolution and connection table of Pasternak in the base station of Nakano utilizing the wireless transmission of Watanabe. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to centralize the transfer of data in order to increase system efficient for multi-cell transmission.

Regarding claim 11, the limitations of parent claims have been addressed above.

Nakano does not disclose *the receiving wireless network node derives a relevant packet of the packets from the superpacket, the relevant packet having said address designation belonging to the associated network cluster*

Pasternak teaches checking the overhead address field to determine whether the received cell should be utilized (See column 13, lines 52-54,) and maintaining a connection table for virtual circuits (See column 14, lines 39-40.) Pasternak further teaches that delegating as many functions as possible to the base station, in a point-to-multipoint system, is favorable because it

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eliminates the need to replicate the same function in all terminals in a network (See column 1, lines 63-67.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the address resolution and connection table of Pasternak in the base station of Nakano utilizing the wireless transmission of Watanabe. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to centralize the transfer of data in order to increase system efficient for multi-cell transmission.

6. Claims 7, 8, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. (US 6,442,149 B1) in view of Watanabe et al. (US 6,084,888) and Lin et al. (US 5,742,599), and further in view of Freeburg et al. (US 5,940,381) hereinafter referred to as Freeburg.

Regarding claims 7 and 17, the limitations of parent claims have been addressed above.

Nakano does not disclose *a management system which controls at least one of the wireless network nodes such that the at least one wireless network node provides the establishment of point-to-point connections only instead of point-to-multipoint connections.*

Freeburg teaches a method of traffic management depending on the flow of data that utilizes a unidirectional point-to-point connection for an upstream connection (See column 5, lines 26-37.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the traffic management system of Freeburg in the base station of Nakano utilizing the wireless transmission of Watanabe. One of ordinary skill in the art at the time the

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invention was made would have been motivated to do so in order to minimize data processing for the wireless transmission of a group of ATM cells.

Regarding claims 8 and 18, the limitations of parent claim1 have been addressed above.

Nakano does not disclose *sending a key via a point-to-multipoint connection and for sending coded data via a point-to-point connection.*

Freeburg teaches a method of traffic management depending on the flow of data that utilizes a unidirectional point-to-multipoint connection for a downstream connection including the transmission of overhead and a unidirectional point-to-point connection for an upstream connection including the transmission of data payload in a base station to minimize processing (See column 5, lines 26-37.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the traffic management system of Freeburg in the base station of Nakano utilizing the wireless transmission of Watanabe. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to minimize data processing for the wireless transmission of a group of ATM cells.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L Mills whose telephone number is 703-305-7869. The examiner can normally be reached on 8:00 AM to 4:30 PM.

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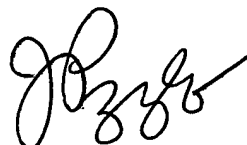
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Donald L Mills



June 10, 2004



JOHN PEZZLO
PRIMARY EXAMINER